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MANSTEIN'S CAMPAIGNS--MORE THAN TACTICS

BY

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MANSTEIN'S CAMPAIGNS - MORE THAN TACTICS

AN INDIVIDUAL STUDY PROJECT

by

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The purpose of this paper is to analyze selected campaigns/ operations of Field Marshal Erich von Manstein in order to draw lessons from those campaigns as they relate to command, control, communications (C^3) and logistics - subjects of immediate and relevant interest to those who take up the profession of arms. But all too often, histories of battles, campaigns and entire conflicts neglect the treatment of these areas. And when these factors are dealt with, the treatment they receive is likely to be rather shallow, lacking the depth necessary for the student to analyze these factors/functions as they related to overall success or failure. This analysis will be conducted of specific, delineated functions as they relate to C^3, but owing to the far reaching scope of logistics, this paper will be limited to treating a few critical aspects of logistics as they impacted on the campaigns of Manstein and the German Army. The second chapter will introduce Manstein to the reader and highlight his accomplishments. Chapter III will deal with C^3 functions as they related, supported or were used by Manstein, and the fourth chapter will deal with key logistics issues as they influenced/impacted the campaigns of Manstein. The final chapter will present some conclusions and broad lessons derived from the German experience in general.

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MANSTEIN'S CAMPAIGNS - MORE THAN TACTICS

CHAPTER I

INTRODUCTION

On 1 September 1939, the German Army smashed into Poland and in five short weeks forced her to capitulate. But Poland was a backward nation with a poorly equipped and ill prepared army. France and her allies would be a different issue. The German war machine would surely be held in check by the French Army, by all accounts the largest and "best equipped" army on the continent. To the strategic calculus was added the seapower of Britain and her expeditionary forces deployed to France, and the victory of the allies appeared to be all but assured. At a minimum, if not thrown back to her original borders, the final German drive for European hegemony would assuredly be dashed on the Maginot Line. But to the dismay of France and Britain, the outcome was not to be decided by the prevailing conventional wisdom:

> Before the end of June 1940, Germany bestrode the continent of Europe like a colossus. She dominated the whole of western, central and south-eastern Europe - except for the small island of Britain on the western fringe.[1]

In the late spring of 1940, the world was awe-struck by the apparent invincibility of the German war machine. Subsequent to some lesser operations, Hitler unleashed his army on Russia in June 1941. After a few brief weeks the army was poised to seize Leningrad in the north, capture the Russian capital and wrest complete control of the Ukraine from the Soviets. However, now the fortunes of war turned, the German Army was held at bay and

after some number of local victories in 1942 the German Army was driven steadily rearward and by 1945 Germany was helpless in front of the allied armies that fought against her. What had happened to the German Army and blitzkrieg? The answer is perhaps best provided by Gen F.W. von Mellenthin:

> By the end of 1941 [the] German war economy was in a serious plight. We did not have the oil supplies necessary for waging war on a world-wide scale; the Eastern campaign was making colossal demands for vehicles, armor, antitank guns, and spare parts... By the end of 1941 it had become impossible for Germany to win the war... The war dragged on into 1942, but the time for blitzkrieg tactics had passed, never to return.[2]

It is not the intent of this study to investigate the operational art as practiced by the German Army during the Second World War. Libraries are full to bursting with accounts of German armies smashing and encircling their foes, or of German commanders countering the thrusts of numerically superior foes. The purpose of this study is to examine a few key areas of immediate and relevant interest to those who take up the profession of arms namely command, control, communications and logistics. For war is not simply a matter of doctrine, tactics, techniques and the subsequent fielding of armies. War is much more; it involves commanding and controlling forces to some political end, and perhaps most importantly, it includes the sustainment of those forces in the field. To this end, this all too brief study will deal with C^3 and logistics as they were used, related and or impacted the campaigns of Field Marshal Erich von [Lewiniski] Manstein, who may well have been Hitler's most brilliant general.

Manstein was one of the architects of blitzkrieg and perhaps its most successful practitioner. By following him during selecte. campaigns, one is provided key insights into how Manstein commanded and controlled his forces, and how his tactics and operations were impacted by the lack of German logistical capabilities. Many of these same considerations or broad aspects of the art of war must be dealt with today if we are to be successful on the battlefield of tomorrow.

CHAPTER I

ENDNOTES

1. B.H. Liddell Hart, Strategy, p. 253.

2. F.W. von Mellenthin, Panzer Battles, trans H. Betzler; ed. by L.C.F. Turner, p. 429.

CHAPTER II

FIELD MARSHAL ERICH VON (LEWINSKI) MANSTEIN
THE MAN AND HIS ACCOMPLISHMENTS

If one is interested in examining command, control, communications and logistics from an historical perspective, why examine the campaigns of Manstein? The answer is quite simple; Manstein may arguably have been the most brilliant general of the Second World War. Captain B.H. Liddell Hart following his interviews with German generals at the end of the war observed:

> The general verdict among the German generals I interrogated in 1945 was that Field-Marshal von Manstein had proved the ablest commander in their Army, and the man they had desired to become its Commander-in-Chief ... In sum, he had military genius.[1]

Erich von Lewinski was born on 24 November 1887 to a military family that produced seven general officers during the twentieth century.[2] The tenth child of Artillery General Edward von Lewinski, Erich was adopted by his natural mother's sister Hedwig von Manstein for the Manstein's had no children of their own. Following a typical childhood for a youngster of an old aristocratic family, Manstein entered the Royal Prussian Cadet Corps in 1900 and joined the Army in 1906. After seven years with the Third Foot Guards, he was assigned to the staff course of the Kriegsakademie and at the onset of World War I he was the adjutant of the 2d Reserve Regiment of the Guards.[3]

Participating in a number of major engagements to include the attack on the French fortress of Verdun in 1916, and once

wounded, Manstein was taken into the Reichsheer* following the German collapse of 1918. In 1929 he became a member of the general staff. While on the general staff, Manstein made a number of enemies, "for he was not an easy man to serve over ... while he was charming to subordinates ... he was intolerably arrogant with his equals and superiors."[4] A lesser man may well have had his career cut short, but Manstein's military brilliance was evident to all who came into contact with him. But he was more than brilliant, he was a man who lived by the highest moral standard and had a pronounced sense of fairness. As a result,

> In 1934, when he was Chief of Staff of the Berlin Command, an order came through for the dismissal of certain officers because they had Jewish blood. Von Manstein refused to pass the order ... Blomberg (Minister of War) ordered Manstein's dismissal but von Fritsch, who was commander-in-chief of the Army refused ....[5]

Rather then being dismissed, Manstein retained his post and in 1936 became the Chief of Army Operations. However when his mentor, von Fritsch was removed from his position, Manstein was quickly transferred to the "relatively insignificant command of an infantry division."[6] But by the time of his dismissal, he had already made a personal mark on the German Army. Through his thoughtful endeavors the 100,000 man Reichsheer had been trained so that each man could assume the next higher post; i.e., platoon commanders could command a company, company commanders a battalion and so on. As a result when Hitler decided to expand the Army, a highly qualified trained cadre was available to

* The Reichsheer was the 100,000 man army Germany was permitted under the terms of the Treaty of Versailles.

implement the expansion program. Similarly, as General Heinz Guderian was championing the cause of massed armored formations, potentially depriving the infantry arm of tank support in the infantry battle, Manstein sponsored the development and use of the assault gun to provide assaulting infantry a mobile weapons system capable of engaging pin-point targets, infantry, gun-crews or tanks.[7]

Following his tour as the commanding general of the Eighteenth Infantry Division, Hitler appointed Manstein Chief of Staff, Army Group South, commanded by General Gerd von Rundstedt. Shortly thereafter, Army Group South particpated in the conquest of Poland and once again his sense of honor and moral obligation was made manifest:

> During the campaign Manstein interceded asking that due consideration be shown to the Polish civilian population. He was strongly supported in this by his GOC. With Rundstedt he also tried to dissuade Hitler from bombing Warsaw, but in vain.[8]

Continuing to serve as Rundstedt's Chief of Staff, Rundstedt became Commander of Army Group A for the planned offensive against France. It is during this period that Manstein's reputation as a soldier of unparalleled military brilliance was firmly established, for it was he who significantly modified the original plan for the invasion of France.

The initial German concept for the invasion of France was derived from the conventional wisdom that the only possible course for such an invasion was through Belgium and Holland; the Maginot Line was too heavily fortified and the Ardennes was a natural barrier to mechanized forces. Therefore only a limited

objective attack to the north could succeed. While seizing Belgium, Holland and the French Channel Coast, the plan conceded that French and allied forces would be able to fall back to the Somme. "Once there, he could draw on his powerful reserves to build-up a new front ... The operation planned by O.K.H. would bring partial victory ...."[9] Following his review of Army High Command's (OKH) plan, Manstein realized its flaws; i.e., it would not lead to rapid, decisive victory over France. As a result Manstein met with Guderian and queried him as to the feasibility of moving mechanized forces through the Ardennes. As one of the fathers of German mechanization, Guderian's views held great weight with both Manstein and Rundstedt. As Providence would have it, Guderian was familiar with the Ardennes as a result of experience there in World War I. After a careful map study, he confirmed Manstein's view that a mechanized advance through the Ardennes was indeed feasible.[10] However repeated messages and correspondence from Rundstedt to Army Headquarters requesting the plan's modification, as recommended by Manstein, were largely ignored.

After a series of incidents which postponed the offensive, the German Army High command inadvertently provided the catalyst for the approval of Manstein's plan. On 27 January 1940, Manstein was transferred to an infantry corps command. "It was decided to remove him from his post ... where he would be out of the main channel and not so well placed to push his ideas."[11] But now, following a conference with Hitler for all newly appointed corps commanders, a private meeting was arranged

between the two principals. The results of that meeting sealed France's fate, for following the meeting Hitler directed O.K.H. to revise their plan in accordance with the views of Manstein - the "Manstein Plan", as it came to be known, had been approved! Now the main attack would be launched through the Ardennes, its objective - to force French capitulation. The van of the offensive through the Ardennes consisted of an armored corps led by Guderian, who mercilessly drove his tanks forward shattering the French defenses. German forces quickly penetrated France below the Somme denying the French the opportunity to consolidate a secondary defensive line. Once the Somme had been breached, no major obstacle remained between the Germans and Paris. As a consequence, in six short weeks France was forced to capitulate and the military prowess of Manstein were now recognized by friend and foe alike.

During the French campaign, Manstein attacked across the Somme on 5 June with 38 Corps (infantry). It was during this brief campaign that Manstein's initiative and personal leadership style emerged. When out of communication with his higher headquarters he made his own evaluation of the situation and acted without hesitation.

Following the conquest of France, Hitler began initial preparation for the invasion of Russia and Manstein was appointed to the command of the 56 Panzer Corps. This appointment to command a mechanized formation, that included 570 tanks, fulfilled a long held desire on Manstein's part.[12] And in short order, Manstein would have the opportunity to prove himself as one of World War II's ablest commanders.

56 Panzer Corps was assigned to Fourth Panzer Group of the Northern Army Group for the invasion of Russia. Indeed, it would be Manstein's corps that would lead the attack of the Fourth Panzer Group. Realizing that speed was essential if the Russian Campaign was to be brought to a rapid and decisive conclusion, Manstein made an advance of 210 miles in the first four days of the campaign, capturing the critical bridges at Dvinsk.[13] It was the capture of these bridges that would allow the German advance to continue. Success continued to follow 56 Corps and in Sept 1941, he was given the command of Eleventh Army. As the commander of the Eleventh Army, following a grueling campaign, he managed to conquer the Crimea.

With the capture of the fortress of Sevastopol on 1 July 1942, Manstein was promoted to Field Marshal and thereafter was assigned the mission of seizing Leningrad. Though he was unsuccessful in this attempt, he was responsible for the destruction of a Soviet army on Lake Ladoga.[14] Following the Russian offensive in November 1942, that surrounded the German Sixth Army at Stalingrad, Manstein assumed the command of the newly created "Don Army Group." After a gallant, albeit, unsuccessful bid to relieve the forces at Stalingrad, Manstein directed what most consider his most brilliant operations in stemming Russian counteroffensives in the winter of 1942-43.

> The winter campaign conducted by Field Marshal Erich von Manstein on the Russian southern front was one of the most brilliant of World War II. It is a classic example of the art of war practiced at the operational level; specifically it demonstrates the use of the mobile defense to wrest the operational initiative from an enemy vastly superior in numerical strength.[15]

Thereafter in the summer of 1943, Manstein played a major role in the battle of Kursk - "Operation Citadel." When the battle of Kursk, for a number of reasons, was terminated Manstein led his army group, renamed Southern Army Group, through a series of primarily, defensive battles against vastly superior Russian formations. Finally, "at the end of March 1944 ... v. Manstein was relieved of his command as the result of his differences with Hitler over the conduct of operations in the east."[16] Manstein never saw active service again.

That Manstein was a brilliant staff officer and commander is beyond dispute. In describing Manstein, Guderian referred to him as, "our finest operational brain".[17] With the war going badly in the summer of 1944, realizing the need for organizational change, Guderian pressed for the reorganization of the Wehrmacht General Staff (OKW) with Manstein at its head.[18] But more than an able soldier, Manstein was a leader consumed by an unbending code of personal honor and a knightly sense of chivalry. To those that did not know him, he seemed aloof, cold and standoffish. But those who served with Manstein, such as General Theodor Busse, Manstein's Chief of the Operations Section of the Eleventh Army staff, saw the "real" Manstein. "Beneath his icy exterior there was a kindly, indeed an emotional humanity. I got to love him as I have never loved another man."[19] Perhaps how closely he was bound to his men and how personally he was affected by their death can best be judged from the transcript of a graveside tribute delivered by Manstein. Sergeant Frederich Nagel had been Manstein's personal driver, and upon his death in the Crimea Manstein spoke at the graveside:

> We are taking leave of a very dear friend ... He was a good friend, always cheerful and helpful, and with a place in the heart of each one of us as a result. My gratitude and constant friendship, and the thoughts of all of us, follow him beyond the grave and to eternity. My dear friend, may you rest in peace.[20]

But concerned as he was with the health and welfare of his subordinates, he also had a keen sense of responsibility to those his formations had vanquished. "He was particularly interested in the accommodation and feeding of the enormous numbers of prisoners of war, he worried about the needy civilian population of the Crimea ...."[21] To this end Manstein issued orders directing courteous behavior of his troops in the Crimea and personally ordered, "that the last cow and the seed corn of the peasants were in no circumstances to be requisitioned."[22] But his sense of honor extended beyond a concern for the civilian population and traditionally defined prisoners of war. In Russia the German Army was confronted by the existence of commissars in the Russian military. Though not military personnel, they were fanatically driven politicos who in large measure were responsible for the ill treatment accorded German troops who surrendered to Russian forces. In anticipation of the Russian Campaign the Supreme Command of the German Armed Forces (O.K.W.) issued what was to become known as the "Commissar Order." Commissars not being combatants, as recognized by international law, were to be shot upon their capture. But no matter what their status, Manstein was deeply disturbed by the order. "An order like the Kommissarbefehl (Commissar Order) was utterly unsoldierly ... it ... would have threatened ... the honor of our

fighting troops ...."[23] Therefore, Manstein, much to his credit, refused to carry out the order in any of the formations he commanded. As a result of his soldierly conduct throughout the Second World War, when brought to trial in 1949, he was acquitted of all charges concerning his own personal conduct.

As to be expected of a leader of Manstein's ilk, he was not one to sit idly by and silently endure the mismanagement of military operations - even if this meant open criticism of Hitler himself. Manstein, as previously mentioned, had the reputation of quarreling with his superiors. And as to be expected of Manstein, as the war in the east turned badly against German fortune, Manstein became openly critical of Hitler's direction of military operations. On more than one occasion, in face-to-face confrontations with his Commander-in-Chief, he stated that Hitler should turnover command of the eastern front to a competent general. As an example on 3 September 1943 Manstein flew to Hitler's Headquarters and for the second time "told Hitler that his strategic direction was at fault, and that he should hand over to a competent general. Hitler flew into a rage...."[24] Finally in March 1944 he could suffer Hitler's direction of military affairs no longer and told Hitler's adjutant to inform Hitler to find another Commander-in-Chief for Army Group South. In a matter of days Manstein was replaced.

So who was this man who had the audacity to openly confront Hitler? He was a man of incredible powers in the arena of military operations, a tactician and strategist of unquestionable talent and a commander possessing the requisite skills to counter

the thrusts of a vastly numerical foe. He was a man who may well have possessed military genius in the truest sense of what "genius" connotes when associated with military leaders of renown. But he was far from the stereotypical Prussian image portrayed in war films. For he was also a thoughtful, sensitive and compassionate man who went into battle with an unyielding sense of honor and an uncompromising set of higher moral values. As a result, he came into direct confrontation with Hitler regarding the conduct of military operations and was subsequently relieved of his command. Manstein may best be remembered for his military genius, but he possessed much more than genius, for he possessed a moral fiber, candor and sense of honor that should be a way of life for all of those that practice the profession of arms.

CHAPTER II

ENDNOTES

1. Erich von Manstein, Lost Victories, p. 13.

2. F.W. von Mellenthin, German Generals of World War II: As I Saw Them, p. 19.

3. Ibid., p. 20.

4. R.T. Paget, Manstein, His Campaigns and His Trial, p. 5.

5. Ibid.

6. Ibid.

7. Albert Seaton, The German Army 1933-1945, p. 167.

8. Von Mellenthin, German Generals of World War II, p. 25.

9. Manstein, pp. 101-102.

10. B.H. Liddell Hart, The Other Side of the Hill, p. 153.

11. Ibid., p. 155.

12. Von Mellenthin, German Generals of World War II: As I Saw Them, p. 28.

13. U.S. Army War College, Art of War Colloquium, Conversations with A Stuka Pilot, p. 110.

14. Manstein, p. 565.

16. LTC Lawrence L. Izzo, An Analysis of Manstein's Winter Campaign on the Russian Front, 1942-1943; A Perspective of the Operational Level of War and Its Implications, p. 1.

17. Len Deighton, Blitzkreg From the Rise of Hitler to the Fall of Dunkirk, p. 68.

18. Walter Goerlitz, History of the German General Staff 1657-1945, trans Brian Battershaw, p. 478.

19. Paget, p. 36.

20. Von Mellenthin, German Generals of World War II: As I Saw Them, p. 33.

21. Ibid., p. 32.

22. Paget, pp. 40-41.

23. Manstein, p. 180.

24. Paget, p. 61.

CHAPTER III

COMMAND, CONTROL AND COMMUNICATIONS (C^3)

GENERAL

The previous chapter introduced Manstein and briefly detailed his accomplishments. But the study of military history, especially if one is interested in drawing lessons from that history for present applicability, should concentrate on the how and why of an event rather than the who or what. More simply we should focus on why Manstein was successful not on his accomplishments per se. So with this in mind, let us now turn our attention to certain specific C^3 functions as they related, supported or were used by Manstein to gain success. Command, control and communications are specific functional areas of tremendous scope that are hopelessly intertwined one to the other; this is especially true in the discussion of command and control. After all in order to effectively command one must have the requisite control and effective control generally requires some means of effective communication. As a result, although this chapter will attempt to focus on the separate functions individually, one must remain cognizant of the interdependence of each aspect of C^2 or C^3 to the other.

COMMAND AND CONTROL - DEFINITION

The first step in investigating command and control is to define the terms/function. To this end Joint Chiefs of Staff Publication 1 (JCS Pub. 1) defines command and control as:

> The exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities and procedures employed by a commander in planning, directing,coordinating and controlling forces and operations in the accomplishment of the mission.[1]

Though the above reference specifically defines "command", the definition concerns itself with the legal basis of command rather than a generic description of command and its method of execution. Therefore, for the sake of relevance, this chapter will concern itself with Manstein's philosophy and his modus operandi in commanding and controlling his subordinate formations.

COMMAND

The most effective way to come to appreciate Manstein, the commander, is to focus on specific aspects of command that were of the greatest import to him. First and foremost, due to the pace of mobile operations, Manstein was convinced that commanders, especially of major formations, should be visible to the troops. This was the case because:

> It was even more vital, in view of the unprecedented demands which our new war of movement made on the energies of officers and men, that higher commanders should show themselves as often as possible to the front-line troops. The ordinary soldier must never have the feeling that the 'top brass' are busy concocting orders somewhere to the rear without knowing what it looks like out front.[2]

Consequently, in reading various accounts of Manstein's campaigns a constantly repeated word picture is painted of Manstein at or near the front. "Field Marshal von Manstein's type of leadership was typified by his preference to perform the duties of the army ... commander from an advanced command post while the working staff set to work in peace in the rear areas."[13]

But as important as his presence at the front was to the morale of front line units, Manstein was equally drawn to the head of his advancing formations by two other considerations. First, due to the very nature of fast paced mobile operations, situations changed rapidly and constantly. As a result, Manstein, as well as other German commanders of note, held the unshakeable belief that success could be fully exploited only if the commander was far forward receiving reports and issuing orders with minimum delay.[4] As Manstein himself stated the case, "situations changed so rapidly, and favorable opportunities came and went so fast, that no tank-force commander could afford to bind himself to a command post any great distance to the rear."[5] Secondly, Manstein believed the most effective method for teaching his subordinates was by personal example - by being at the front, his subordinate commanders themselves would lead from the front. And when they were at the front, Manstein expected, even demanded, that his commanders use their own initiative.

For Manstein the ability of his commanders to use their own initiative was absolutely critical for success. Well prior to the Second World War, the German Army was already certain of the value of cultivating initiative in subordinates. In writing on the subject following the Second World War, General von

Mellenthin stated, "we always placed emphasis on the independent action of the subordinates, even in peace time training."[6] Subordinate initiative and the ability to take independent action was assessed to be a force multiplier in mobile operations. And when confronted by a numerically superior foe, "Manstein ... realized that his own strength lay in the superior training of his junior commanders and their capacity for independent action and leadership."[7] This capacity for independent action, coupled with adequate communications, gave the German Army a tactical flexibility unmatched in either the French or British Army.[8] Trained to lead from the front and to use their own initiative in carrying out the orders of their senior headquarters, German commanders were prepared to change their plans very rapidly to meet or exploit the developing situation.

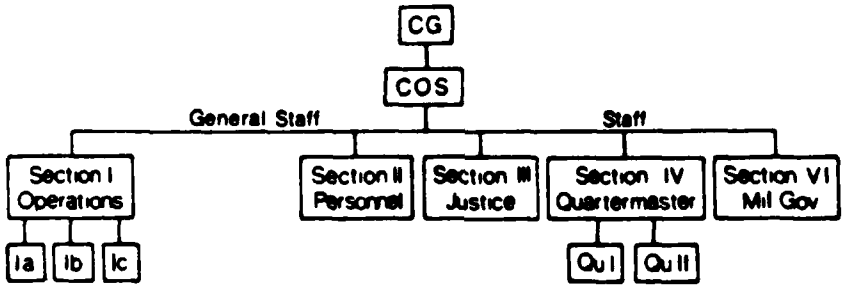
In pursuit of developing initiative in his subordinates, Manstein was meticulous in his personal dealings with them. Therefore, whenever possible orders passed from his headquarters to subordinate commanders, assigned tasks to be performed and left the method of execution to the subordinate commander. In today's parlance this is referred to as issuing/receiving "mission" type orders. Certainly there were situations that required Manstein to issue his subordinates detailed orders. But such orders were issued only when "operational intentions involved the assumption of responsibilities which it would have been unreasonable to expect the ... headquarters in question to accept."[9] And responsibility to Manstein went hand-in-glove with initiative, and Manstein held his subordinate commanders

accountable. During the Crimean Campaign the Russians conducted landings in the Crimea, most notably along the Kerch Peninsula. On one occasion, Lt. General Sponeck, the commander of one of Manstein's corps, issued orders to abandon the Kerch Peninsula when Russian troops landed to his rear. Manstein attempted to countermand the order, but his order never reached Sponeck and the peninsula was abandoned without a struggle. Immediately after this incident, Sponeck was relieved of command.[10] For to Manstein the only standard by which a commander could accurately be judged was through his own success or failure. And to Manstein the commander's responsibility regarding success or failure was absolute: "no general can vindicate his loss of a battle by claiming that he was compelled -against his better judgment- to execute an order that led to defeat."[11] Therefore as the situation arose, Manstein was of the firm opinion that it was the commander's proper course to disobey for which "he is answerable with his head."[12] As a result Manstein on more than one occasion acted contrary to Hitler's orders when he felt it necessary to do so. Fortunately for Manstein success usually proved him right on these occasions and Hitler understandably tolerated his disobedience. To Manstein "command" was almost a sacred trust, wherein the only measure of the commander was either his success or failure in accomplishing the assigned mission.

COMMAND AND CONTROL

Having briefly highlighted Manstein's method and philosophy of command, an examination of some broader issues is in order.

First the German philosophy of command and control and the primacy of operations is evident in the organization and focus of their tactical headquarters. The below wiring diagram of a German Army staff may appear, on the surface, to be somewhat parallel to its U.S. counterpart of World War II. However, there were a number of differences and two of the more notable are the roles and functions of the Chief of Staff (COS) and the operations section. In general the COS position was a much stronger, more powerful position than that of its U.S. counterpart. When the commander was away, the COS had rather broad directional authority; i.e., he acted as the deputy commander and, generally had complete freedom to make his own decisions.[13] Consequently it was absolutely essential that the commander and his COS think alike and speak with one voice. As a result, the position of COS was a position wherein a staff officer could rapidly gain the requisite command experience to head major operational formations.



Extracted from Martin Van Creveld's Fighting Power: German and U.S. Army Performance, 1939-1945 (Westport, Connecticut: Greenwood Press, 1982), p. 48.

Given broad latitude by von Rundstedt, Manstein as von Rundstedt's COS for the conquest of Poland, gained first hand experience in army group level operations. As a major general, Manstein was able to experience army group command, a formation he would not command until he was appointed a field marshal. Certainly, the prevailing philosophy regarding the COS position in all its major formations lent great continuity to German Army operations. Officers appointed to command corps', armies and army groups were not unknown entities in directing these formations, for in fact as COS officers many of them had had first hand experience in directing such formations. Additionally, "German staffs at all levels were operational and tactical organs above all."[14] Their primary focus was to provide direction in combat while dedicating a minimum effort to other tasks. As a result, general staff officers were concentrated in the operations section of major formation headquarters, indeed in the division the operations officer doubled as the COS. Obviously, the emphasis on operations paid considerable benefit on the immediate battlefield, but it may have failed to recognize the import of some other functions, namely logistics, which will be discussed in the next chapter.

After viewing the basic diagram of a German Army Headquarters, it may appear to be a rather austere organization. But in reality the staff itself consisted of almost 500 personnel, supported by a signals regiment of 1850 men and other various organizations that pushed the headquarters personnel to approximately, 2700.[15] Consequently, during operations when

Manstein went forward to view operations for himself, he was supported by a rather small tactical headquarters, while his COS stayed behind to conduct the day-to-day business required of a corps or army headquarters. It was in this manner that Manstein could command and control from the front without unduly disrupting the activities of his entire headquarters and if the situation changed he knew his COS was prepared to take requisite action in the name of the commander. And when he went forward Manstein uniquely applied his command philosophy to the control of his subordinate formations especially in regard to infringing on the responsibilities of his subordinate commanders.

To this end he refrained from offering off-the-record "advice" to his subordinate commanders. During his time with front line units he necessarily discussed the conduct of a particular unit's operations. But, as a rule when a subordinate commander held differing views with Manstein over the conduct of a particular operation, Manstein acquiesced to the subordinate's view as long as the operation had no far reaching impact on Manstein's concept of his overall operational goals. More simply put, when the matter discussed was rightfully within the purview of the subordinate commander, he did not force the issue and he supported his subordinate's final decision. As an example, in July 1943 while countering a major Soviet offensive, Manstein while at the front met with one of his subordinate army commanders - General Karl Hollidt. The issue arose of whether to commit recently arrived forces to an immediate counteroffensive or delay the attack until additional forces could be brought to bear. Manstein held the opinion the counteroffensive should be

delayed, but in the end Hollidt had his way and the counter-offensive was launched.[16] Much can be said of incidents such as this, but one issue stands above the rest, both men were cognizant of their own responsibilities and acted accordingly. Individual responsibility and initiative were to be preserved; Manstein did not travel to the front to take command of subordinate formations and interject himself in the affairs of his subordinates. There were exceptions, but Manstein generally resisted the temptation to meddle in the business of his subordinate commanders.[17]

Conversely, when the issue at hand was one that had far reaching consequences for his command as a whole he guided his subordinates with a firm and sure hand. During a massive Russian offensive in March, 1944, the First Panzer Army, under the command of General Hans Hube, was virtually isolated from the army group. With enemy formations to his north, west, east, Hube communicated his intent to withdrawal southward away from the enemy pressure, but such a withdrawal would have further isolated his army from the army group as a whole. Manstein realizing the operational implications of such a course, isolation of First Army and its piecemeal destruction as well as the loss of combat power to the army group as a whole, demanded Hube breakout to the west and close the army group. Manstein held firm against the repeated urgings of Hube and in the end First Panzer Army successfully broke out and rejoined the army group. As can be seen, Manstein was keenly aware of when he should personally interject himself in the decision making process. In a similar

fashion, Manstein was cognizant of the unique requirements of commanding allied formations in coalition/combined warfare.

COMMAND AND CONTROL OF ALLIED FORMATIONS

From the time he assumed command of the Eleventh Army in Sept. 1941 until his relief in March 1944, Manstein's commands included allied formations, most notably Italian, Rumanian and Hungarian forces. As a result, Manstein had to develop and maintain an appreciation of the complexities of combined warfare. In his memoirs the reader is brought face-to-face with some of the more critical aspects of combined warfare. As an example upon his assumption of command of the Eleventh Army, Manstein was confronted with the sensitive task of directing the activities of the Rumanian Third Army. As Manstein writes, "at the best of times it is embarrassing for an army headquarters to have to control another self contained army ... twice as difficult when the army in question happened to be an allied one."[19] But much more than grappling with sensitivities was involved, for Manstein had to analyze the capabilities of those allied forces, and employ them accordingly. Therefore, he had to become familiar not only with the weapons and equipment of his allies, but also their state of morale, quality of leadership and motivational factors that contributed to their operational efficiency, or lack thereof.

To be sure, assessing an allies capabilities vis a vis his weapons and equipment is a relatively simple task as compared to assessing his fighting capabilities as they relate to leadership, morale etc. And it is in this area for assessing the intangibles

that Manstein demonstrated capabilities requisite for all combined commanders past, present or future. First he was attuned to the national political objectives of his allies which impacted their morale and fighting qualities. When he assumed command of the Eleventh Army, his Rumanian allies had already attained their fundamental war aim - the reconquest of Bessarabia.[20] Consequently, the Rumanians were less than enthusiastic about driving further into the Russian heartland. Secondly, Manstein recognized that the Rumanian Army had not cultivated a true non-commissioned officer corps with all the resulting impact that had on small unit leadership. And lastly, Manstein concluded that medium and senior level Rumanian officers were generally lacking in the skills requisite for executing their responsibilities and that an officer-enlisted bond was absent.[21]

In order to partially remedy the deficiencies he had noted, Manstein attached German liaison teams down to division level in the Rumanian Army for the purpose of ensuring adequate C^3 between German and Rumanian units and to ensure Rumanian units were cognizant of their tactical responsibilities. And typical of Manstein, during critical periods in his allies' sector, he would move to the affected sector with a small tactical staff. This he did to ensure Rumanian counterpart staffs held firm.[22] Indeed as required Manstein would move forward to rally Rumanian formations once their lines were penetrated by Russian forces.[23] Similarly, Manstein took much the same course <u>vis a vis</u> Hungarian forces under his command. In sum Manstein was an able commander of

combined forces and developed keen insights into the demands of employing combined forces.

COMMUNICATIONS

As stated in the introductory paragraph to this chapter, effective command and control generally requires some means of effective communications. And in this area Manstein, as well as other notable German commanders of the Second World War, are indebted to General Heinz Guderian. Guderian was more than one of the father's of German mechanization. He did more than urge on tank development, for he went one step beyond and accurately identified the key communication requirements necessary to prosecute mobile warfare. Guderian realized that without an integrated, wide spread communications network the doctrine of high mobility, rapid penetration by panzer units was invalid.

Guderian had had experience as a German signals officer in the First World War.[24] And this experience convinced him that if fluid, mobile operations were to be conducted radio communication had to be widespread from the highest headquarters to the lowest possible unit.[25] For he was convinced that commanders of mobile formations, for a variety of reasons, had to lead from the front. Commanders could not be desk-bound to receive telephone reports, but had to command from the front using radio. His views brought him into open confrontation with some of his superiors, but in the end his views held sway. Consequently, Guderian made two vital contributions concerning communications to mobile armored warfare. First, he added a fifth man, a radio operator and radio to each tank. Secondly, he was instrumental in the development

of communication vehicles for use by major formation commanders that allowed them to command and control from any point on the battlefield. The results of Guderian's communications improvements are best summarized by General Hermann Balck:

> This allowed both small and large tank units to be commanded and maneuvered with a swiftness and flexibility no other army was able to match. As a result, our tanks were able to defeat tanks that were quite superior in fire power and armor.[26]

More than a theoretician, Guderian put his concepts into practice during the Polish Campaign. As a corps commander, he employed his half-track command vehicle and went into a battle with his lead tanks. "It was the first time a senior officer had accompanied tanks in this way."[27] As a result of Guderian's vision and dogged determination, Manstein was provided the communications that enabled him to lead from the front or any part of the battlefield. He was provided a communications capability whereby he could establish contact with his subordinate headquarters as well as his own rear command post and be kept continuously informed of the situation throughout his command's sector.[28]

As important as communications were to armored or mobile formations, radio communications were also the bonding agent that brought the full concept of blitzkreg to realization. For blitzkreg required the complete integration of air and ground fires and radio was the medium for integration. Manstein fully realized the value of tactical aviation in support of ground operations and he was provided the communications assets necessary to prosecute blitzkreg. Generally throughout the

course of the war, German aviation flying in support of ground units attacked preplanned targets.[29] But due to the fluid and rapid nature of mobile operations responsive air-ground communications were a necessity. To meet this need, armored formation commanders were provided with radio assets that permitted them to interface with the aircraft supporting their ground attack. As a result, close coordination between air and ground units was greatly enhanced, and as von Mellenthin commented, "attacks where all weapons were brought to bear in a coordinated fashion were generally successful."[30] Although the air-ground communications system had deficiencies, primarily regarding range, the system proved generally adequate in establishing air-ground coordination.

Though radio communication was a prerequisite for executing mobile operations, it could not provide the type of long range communications required for operations of tremendous depth and width as would be required in Russia. Additionally, owing to the existing state of the art, tactical radio communications were subject to interception and enemy exploitation. Therefore specific communications organizations had to be developed by the German Army during the Russian Campaign. And as one might expect, these organizations were created following the establishment of communication imperatives/doctrine for the unique requirements of the campaign in Russia.

Turning our attention first to communications organizations, the following units were created to support division level to army level communications requirements. Signal/communications units were assigned to:

A. Per Army: One Army signal communication regiment, consisting of one operations and two construction battalions.

B. Per Corps: One corps signal communication battalion, consisting of one telephone company, two field telephone companies, one radio company and one light signal supply detachment.

C. Per division: One division and one signal battalion, consisting of one telephone and one radio company and one light signal supply detachment.[31]

In reviewing the above organization, one is struck by the apparent emphasis on telephone communications. And in practice the German Army's emphasis was indeed on telephone communications.

As a rule radio communication was used only by exception; i.e., during an advance motorized and armored divisions out of necessity were controlled by radio. "But the rule to use radio as little as possible was observed ... since the danger of interception was always taken into account."[32] Consequently, the primary communications to all units was by messenger or telephone. To this end following any advance, telephone communications were established between the higher headquarters and its mobile units. Obviously this doctrinal emphasis on telephone/teleprinter communications placed a tremendous burden on communications organizations, especially in light of reported advances of 50 or more miles per day. But in general, the German communication organizations were up to the task; for as reported by Kenneth Macksey, "field telephone and teleprinter networks ... could be laid down at such high speed that a pace of 100 miles a day could be kept with an advancing formation."[33] Consequently

it was absolutely essential that communications officers be completely intimate with the commander's concept. Only by being completely intimate with the commander's concept could communications officers issue well considered, integrated orders to their subordinates for establishing communications to subordinate headquarters. Responsive communications required that telephone/wire construction units operate as far forward as possible with the advancing forces.

By no means, did the reliance on wire/telephone communications preclude interception, especially over long distance lines. The Germans were aware that communications could be intercepted by Russian agents and partisans and that no means of wire communication was absolutely safe.[34] Nonetheless, the German priority lay with wire communications. And as a result, in Manstein's memoirs the reader is exposed on numerous occasions to both critical and routine communications being passed over wire circuits.

But no matter how great the efficiency of German communications organization in regard to laying wire, occasions arose where radio communications were absolutely essential, either as a primary or secondary communications medium. The expansive nature of the area of operations in Russia, as well as, the isolation of German units drove a requirement for long range radio communications. As a consequence additional communications troops, equipped with long range radio equipment, were raised and trained for incorporation into existing communications organizations, previously described.[35] These newly formed and

equipped units provided commanders such as Manstein invaluable communications support during the Russian Campaign. As an example, while Paulus' Sixth Army was encircled at Stalingrad, Manstein and Paulus were able to communicate via ultra high frequency link.[36] But radio and wire did not provide all the communications necessary especially when highly sensitive information had to be relayed. And to this end, couriers were extensively utilized throughout the campaign.

That the German Army took great pains to ensure adequate communications, especially during Russian campaign, is beyond doubt. But the lasting lessons to be derived from the German experience vis a vis communications lies in the rationale for what they did, and not in what they did per se. First they operated under the principle that means of communication should be established to the lowest unit possible in order to enhance command, control, flexibility and coordination. Second, they developed/organized communication units to provide for as secure a means of communication as possible, and to them that meant wire. Third, they accurately assessed the need for redundancy; "wire should be supplemented by radio and other means."[37] Last, and of greatest relevance today, they realized the import of their communications officers; communications/signal officers had to be completely familiar with the commanders concept of operations if viable communications were to be established. These same considerations are as relevant today as they were over 40 years ago.

CHAPTER III

ENDNOTES

1. Joint Chiefs of Staff, Publication 1, Department of Defense Dictionary of Military and Associated Terms, p. 77.

2. Erich von Manstein, Lost Victories, p. 189.

3. Erich Abberger, Activities of a Senior Engineer Officer of a Field Army During the Campaign in Russia, 10 October 1953, p. 9. Of note Abberger (grade unknown) was the senior engineer for Manstein's Eleventh Army. Originally prepared in German in August 1952, this paper was translated in 1953.

4. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. II, p. 50.

5. Manstein, p. 189.

6. The BDM Corporation, Generals Balck and Von Mellenthin on Tactics: Implications for NATO Military Doctrine, p. 19.

7. Battelle Columbus Laboratories, Armored Warfare in World War II, p. 94.

8. Len Deighton, Blitzkreg: From the Rise of Hitler to the Fall of Dunkirk, p. 152.

9. Manstein, p. 383.

10. U.S. Army War College, Selected German Army Operations on the Eastern Front, Vol. VII A, p. 170.

11. Manstein, pp. 361-362.

12. Manstein, p. 362.

13. BDM Corporation, p. 11.

14. Martin Van Creveld, Fighting Power: German and U.S. Army Performance, 1939-1945, p. 47.

15. Ibid., p. 50.

16. U.S. Army War College, Selected German Army Operations on the Eastern Front, Vol. VII B, pp. 365-7.

17. Manstein, p. 383.

18. U.S. Army War College, Selected German Army Operations on the Eastern Front, Vol. VII B, pp. 410-421.

19. Manstein, pp. 205-207.

20. Manstein, p. 208.

21. Manstein, p. 207.

22. Manstein, p. 215.

23. R.T. Paget, Manstein, His Campaigns and His Trial, p. 38.

24. Battelle Columbus Laboratories, Translation of Taped Conversation with General Hermann Balck, 12 Jan 1979, p. 20.

25. Kenneth Macksey, Guderian: Creator of the Blitzkrieg, p. 73.

26. Battelle Columbus Laboratories, Translation of Taped Conversation with General Hermann Balck, 12 Jan 1979, p. 20.

27. Deighton, p. 125.

28. Manstein, p. 192.

29. U.S. Army War College, Art of War Colloquium, Conversation with a Stuka Pilot, p. 38.

30. F.W. von Mellenthin, Panzer Battles, trans. H. Betzler; ed. by L.C.F. Turner, p. 280.

31. U.S. Army War College, Selected German Army Operations on the Eastern Front, Vol. II, pp. 61.

32. Ibid., p. 63.

33. Macksey, p. 73.

34. In one text the use of a heterodyne circuit is referred to vis a vis wire circuits. Apparently, this circuit made monitoring very difficult. However research to date has been unsuccessful in ascertaining the specifics of the heterodyne circuit.

35. Albert Seaton, The German Army 1933-45, p. 166.

36. Manstein, p. 351.

37. U.S. Army War College, Selected German Army Operations on the Eastern Front, Vol. II, pp. 63.

CHAPTER IV

LOGISTICS

GENERAL

In Chapter III aspects of C^3 were examined as to how they related, supported or were employed by Manstein during his various operations/engagements. This, much too brief, chapter will concern itself with specific facets of logistics as they were considered and impacted the campaigns of Manstein and necessarily the whole of the German Army. The import of logistics in any military endeavor cannot be underestimated. Indeed, in the modern age of "machine warfare" logistical wherewithal is absolutely essential; *without adequate logistical support, the* best equipped of modern armies will be rendered ineffective and perhaps irrelevant. In driving home this point, Martin Van Creveld writes:

> Strategy like politics, is said to be the art of the possible; but surely what is possible is determined not merely by numerical strengths, doctrine, intelligence, arms and tactics, but in the first place, by the hardest facts of all: those concerning requirements, supplies available and expected, organization and administration, transportation and arteries of communication.[1]

And in a similar vain, Liddell Hart writes of the German campaign in Russia:

> The issue in Russia depended less on strategy and tactics than on space, logistics and mechanics. Although some of the organizational decisions were of great

> importance they did not count so much as mechanical deficiency in conjunction with excess of space, and their effect has to be measured in relation to these basic factors.[2]

Prior to proceeding with this investigation of logistics a baseline definition must be established to determine that with which we are dealing. JCS Publication 1 defines logistics as "the science of planning and carrying out the movement and maintenance of forces."[3] In amplification, the publication then goes on to list such functions as design and development, acquisition, storage, movement, distribution, maintenance evacuation and distribution of material as lying in the sphere of logistics. Obviously a paper of this length cannot examine all of these factors as they related to Manstein's operations. Therefore in attempting to limit the scope of this chapter, only certain aspects of logistics, at primarily the strategic and operational level, will be examined. However, as discussion requires, specific aspects of German national policy regarding logistics will be addressed.

BACKGROUND

In reading Manstein's account of his participation in the Polish and subsequent French Campaign, one is impressed with the lack of mention of any issues involving logistics. This omission may be attributed to a number of reasons. First, during the Polish Campaign the German logistics system was saved from possible collapse, due to extensive damage of the transport infrastructure (roads and railroads) by the rapid Polish surrender.[4] Secondly, during the French Campaign even though

significant logistics problems were encountered, most notably in the area of transport, the stopgap measures employed by the German Army may have been effective enough to make the problems/solutions transparent to Manstein, then a corps commander.[5] As a result, in attempting to demonstrate a cause and effect relationship or interplay of logistics and operations in the campaigns of Manstein one must concentrate on the campaign in Russia. For it is in Russia where Manstein, on a regular basis, was confronted with the impact of logistics on operations.

PLANNING

Though the logistics problems encountered by the German Army during the campaigns in France and Poland may have had no impact on Manstein, they were by no means lost on his seniors to include Hitler himself. As a result, the German Army after the campaign in France began a rapid reorganization in an attempt to correct encountered deficiencies. However, most of the deficiencies noted reflected basic German national industrial weaknesses such as an underdeveloped motor transport industry, lack of an adequate secure supply of petroleum products and a general lack of national industrial mobilization to support the war effort. It is not the intent of this paper to dwell on these issues, but any discussion of logistics must at least reference national capabilities/deficiencies. Because in the end, such shortcomings may, as they did in the German experience, prove decisive. It was no coincidence that in the Second World War, "that victory lay with the nations who mustered overwhelming superiority in materiel."[6]

From the inception of planning for the campaign in Russia, staffs at all levels appreciated the fact that this campaign would lay far greater demands on their logistical infrastructure than any campaign to date. Owing to the experience in France and the width and depth of the anticipated area of operations, new supply/logistical organizations had to be created. As a result, supplies would have to be moved forward as the army groups advanced, "supply districts" would have to be created, maintained and managed to supply advancing armies with the necessary logistical wherewithal. The various armies and army groups would have to become more involved in logistics - especially maintenance - than they had in previous campaigns. But as anyone can appreciate, logistical plans can be no better than the operational plans they are intended to support.

Operational planning commenced for the Russian Campaign in October 1940. The final plan, after a number of revisions, was based on the assumption that the campaign would end by the winter of 1941-42, with the German's occupying the bulk of European Russia. With her armies smashed and her industrial capability in German hands, Russia would be forced to sue for peace or, at the most, her continued resistance would be little more than irrelevant. As a result, the logistical plan was developed with the view that following decisive combat operations, logistical support would be provided to German <u>occupation</u> armies in the winter of 1941-1942.[7] That the logistical plan was based on an erroneous operational assumption is obvious, but of equal import was the method employed in developing the logistics plan for the campaign.

The operational plan having been generally developed by December 1940, the Army Chief of Supply and Administration conducted a logistical staff exercise for his subordinates the purpose of which was to examine:

> the validity of present ideas in the field of supply, to determine deficiencies and gaps in the supply structure, to arrive at improvements and ideas for corrective action, and to acquaint all interested parties with the subject matter at hand.[8]

Following this exercise, after final directives had been issued governing the logistical support mechanisms to be in place for the campaign, similar exercises were held for responsible logistics officers at army, corps and division level. What is most interesting about these exercises is that they were apparently held exclusively for logistics types and were not attended by officers concerned with operations, communications, etc.[9]

This brings us back to an earlier point regarding army group staffs and subordinate level staffs: "German staffs at all levels were operational and tactical organs above all; that is their primary function was to provide leadership in combat while devoting only the minimum effort possible to all other tasks."[10] If this is in fact the case, then one must come to the conclusion that due to strict compartmentalization of functions, severe disconnects between operators and logisticians were possible. Or at least, the operators had only the most general appreciation for the logistical difficulties that could severely impact their operational plans. On the surface, it would appear that in the German Army the logistician was not by any means an equal partner

to the operator; i.e., operational plans were developed and then delivered to the logistician to support. This is perhaps best summarized in the U.S. Army's report on Foreign Logistical Organizations and Methods:

> Supply is an inherent phase of planning and executing any military operation. The British organizationally and intellectually seemed to appreciate this much more than the Germans.... The German Quartermaster General was a servant of the German General Staff, no matter what the organization charts might show.[11]

TRANSPORT-GENERAL

Of all the logistical problems encountered, the one most repeated in commentaries about the campaign in Russia is transport:

> The distance which had to be bridged by the Army supply system was so great that methods other than the conventional ones had to be applied. The problem of transportation stood out among all others. As a matter of fact; the entire campaign in the East was influenced by this problem, at least as long as available stockpiles permitted an adequate flow of supplies.[12]

With a width of some 1400 km and an expected depth of some 800-1000 km, the expected operation would necessarily require an extensive and well coordinated transport net to deliver needed supplies to the advancing armies. As an example, it was estimated that 22 train loads of fuel would be required for each month of the operation.[13] Though this and other planning factors proved to be underestimations, the Germans initially believed that their industrial base could support the production of necessary ammunition and fuel. The real issue, for them at least, lay in transporting these supplies to front line units;

i.e., the use of the available highway and railroad network. However, in Russia the German planners were confronted with an unfortunately unique circumstance; "the only road which had been built according to Western European standards and which was given constant maintenance was the Minsk-Moscow highway."[14] Therefore owing to both Russian road conditions and the lack of German truck transport, heavy reliance for the movement of supplies, material etc. had to be placed on the railway net.[15]

TRANSPORT-RAILROAD

German planners on viewing the Russian railway network were confronted by two major issues. First, though European Russia had four major east-west lines and four major north-south lines, the density of track was far below that found in Western Europe; i.e., 1.8 miles per 100 square miles vice 20 miles per 100 square miles.[16] Second, the prevailing gauge of Russian railroads was five feet, as compared to the standard gauge found throughout the rest of Europe of four feet, eight and one-half inches.[17] As a result of these two issues German planners were confronted by a potential need to build additional rail lines and secondly to convert major portions of the Russian rail net to European standards. To meet these requirements railway operating units were activated in 1941 and by 1943 some 50,000 men were devoted to these units.[18]

The import of railways, and the lack thereof had considerable impact on the operations of Manstein. In terms of operational objectives, rail lines and especially their bridges

were vital objectives. In the opening moves of the Russian Campaign, Manstein led his panzer corps on a four day, 200 mile dash to capture the key bridges over the Dvina River at Dvinsk. He captured these bridges on 27 June 1941, and as a result of adequate planning the railway units were operating trains to Dvinsk as of 6 July.[19] Throughout his memoirs the reader is exposed to operational imperatives as they relate to the seizure, maintenance and defense of critical rail lines-of-communication (LOC).

It was as an Army commander that Manstein first fully felt the impact of inadequate rail LOC's. In the autumn of 1941, his Eleventh Army and Rumanian allies commenced operations that would lead to the conquest of the Crimea. Owing to competing requirements for conversion of rail lines, Crimean railroads were not scheduled to be converted to German standard width until April, 1942. In the meantime Manstein was to be supported by truck transport and limited rail transport provided using captured Russian rolling stock. But only upon conversion of the gauge would supply carrying capacity be sufficient to fully support Manstein's efforts in the Crimea.[20] Until the rail conversion and construction was complete, all Eleventh Army communications/supply routes from the west would converge on a single 900 foot bridge across the Dneper at Berislav. Across this bridge would move all his reinforcements and supplies. Having swept across the Crimea, in November his forces were poised for an assault against the Russian fortress at Sevastopol. Initially Manstein anticipated that the assault would commence on the 28th of November, but owing to his lack of resupply the

offensive had to be postponed for three weeks - which proved to be crucial. For in the midst of his assault, Russian forces landed along the Kerch Peninsula, forcing Manstein to cancel the offensive against Sevastopol in order to deal with this new threat from the east.[21] It would not be until 1 July 1942 that he would finally capture Sevastopol. Though other factors also contributed to his difficulties in capturing the Russian fortress, Manstein's lack of supply and supply delays owing to the insufficiency of his rail LOC were a major contributing factor. Manstein's difficulties regarding rail lines is perhaps best summarized by Major General Hellmuth Reinhardt:

> The importance of railroads is illustrated by the Crimean Campaign. It was not until rail lines to and on the peninsula were in operation that the Eleventh Army's supply situation showed any noticeable improvement. However, it took all of six months [April, 1942] to put the rail roads into full operation.[22]

As important as railroads may be for the transport of supplies, they play a key role in other logistic functions, one of which is the redeployment/deployment of combat forces. As an example following the Crimean Campaign, Manstein's Eleventh Army was earmarked for the capture of Leningrad - some 1600 kilometers to the north. Without the use of rail transport this move would have been virtually impossible due to the degradation of equipment, excessive fuel (POL) consumption and the lack of suitable south-north road routes in Russia for large scale troop movements. Due to its movement by rail, "Eleventh Army reached its destination without attrition of equipment or accidents. As a result, the men were well rested and ready for immediate

commitment."[23] Eleventh Army's movement to the Leningrad area was a logistics success. However, on other occasions; e.g., efforts to relieve the Sixth Army at Stalingrad, Manstein's plans for the rapid shifting and concentration of forces were blunted by the lack of requisite, efficient railways.[24] But whatever the shortcomings of the railway support LOC's in Russia during the first 18 months of the Russian Campaign, by the summer of 1943 the rail transport system of the transportation equation was becoming favorable. And as LT Gen Max Bork writes of 1943:

> Every day more than 200 trains crossed the border from Germany ... The expanded rail net was able to handle both the traffic from Germany and the very heavy rail traffic in Russia proper without the least difficulty....[25]

But railroads were only a portion of the transport equation, for once supplies reached a depot by rail they then had to be transported to the using units by whatever means available.

WHEELED TRANSPORT

After reviewing the German plans for wheeled logistics transport in campaigns in France, and especially in Russia, one can come to only one conclusion. The Germans were relying on the ability of a badly frayed shoestring type of operation to meet requisite support requirements, wherein planning was based on optimal factors; i.e., best case planning. In France, a rather modest military campaign when viewed against the backdrop of the expanse of Russia, the German wheeled transport system was stretched beyond the breaking point. As an example, on 20 May 1940 in order to avert a transport crisis, 10 days after the

campaign had started General A. Wagner, quartermaster-general at OKH demanded that the German Minister of Transport immediately, put all the trucks of Germany at his disposal. By 22 May Wagner received 12,000 tons of needed transport for the continuation of the offense.[26] In examining the causes behind the lack of mechanization/motorization of the German armed forces one quickly comes to the conclusion that Germany had an underdeveloped, non-standard motor transport industry.

"On 1 September 1939 there were just under a million four-wheeled motor vehicles on Germany's roads, a proportion of 1:70 per head of the population compared to 1:10 in the United States."[27] As a result during Germany's drive in the 1930's to equip her "mobile army" numerous varieties of vehicles were incorporated into army service without regard for standardization or capabilities. In 1938 there were 100 different types of trucks and 52 types of cars in the army.[28] After the French Campaign, the German Army pressed captured vehicles into service to make good their war losses and expand their motor vehicle fleet. But now in Russia, the German Army found itself utilizing some 2,000 different types of vehicles.[29] To be sure these vehicles met short term operational requirements but the impact of a policy of "making-do" with whatever transport was available had long term negative impacts on Manstein's operations and the German Army as a whole.

As previously noted, few roads in Russia were up to European standards and as a result became impassable to commercial type vehicles after rain, snow etc. The Germans realized this, yet

entered Russia with a fleet of trucks that by and large were incapable of meeting the demands imposed by Russian road conditions. Throughout his memoirs, Manstein repeatedly mentions the problems associated with his lack of transport and or the ability of his transport to function over mud/snow covered roads. To the casual reader, the inability of trucks to operate along muddy tracks, that were the Russian roads following a rain, might not appear out of the ordinary. But in reviewing the situation he faced in the winter of 1943-44, Manstein observed:

> It has already been remarked that the Soviet tanks were more mobile than ours in snow and mud, thanks to their wider tracks. At the same time, however, enormous numbers of American trucks made their appearance on the enemy side. As they were still able to drive over open country when our own were already tied to the few firm roads, the enemy was also able to move the infantry element of his tank and mechanized corps' quickly.[30]

After reading all the accounts of German truck transport difficulties, the proverbial light came on - the Germans did not have four or all wheel drive vehicles? In examining the issue further, Gen Bork's post war paper on Russian railroads and highways partially resolved the issue; "since German trucks were not equipped with all-wheel drive and thus lacked cross-country mobility, their use was restricted to the better roads."[31] The Germans in fact did have some four-wheel drive trucks, but as the demands of mobilization and operations increased commercial two-wheeled drive vehicles were pressed into military service.[32] The basis for Manstein's observations of the capabilities of German vice U.S. trucks is now quite clear; the Germans as the war

progressed were relying more and more on non-militarized motor vehicles that proved grossly inadequate.

What the specific impact was of this German deficiency is difficult to assess accurately. But this reliance on non-militarized trucks that "were flimsy by military standards" was surely one factor in the equation that by February, 1940, some units had to write off 50 percent of their trucks as a result of the road conditions in Poland.[33] And surely the use of trucks, for purposes and under operating conditions for which they were not designed, contributed to the loss of some 75,000 motor vehicles in Russia during the winter of 1941-1942.[34] But aside from the loss of these vehicles, the impact of using inadequate motor transport must also be measured in terms of road construction and maintenance to enable the use of these vehicles. To this end Gen. Bork notes that by November 1942, 440 miles of corduroy road had been laid in Northern Russia entailing the use of some 7,328,500 logs-the equivalent of 336,427 truck loads.[35] This at a time when German truck transport was already unable to meet broad logistics requirements vis a vis front line unit mobility and supply.

Compounding the German problem regarding wheeled transport, no matter what the type, was their lack of sufficient numbers of motor vehicles, especially trucks. As a result only 33 divisions would be fully mechanized and or motorized for the initial assault on Russia with the remaining 111 divisions being supported by insufficient numbers of truck transport. This predicament came about because the Germans realized that the conversion of the Russian railroads would take some time. And

time was their foremost enemy; Russia had to be overrun quickly. Consequently, it was decided to fully support 33 "fast divisions." To this end each armored and motorized division's fuel carrying capacity of some 430 tons was to be augmented by transport permitting these units to launch into the attack with an additional 400-500 tons of fuel.[36] Their operating range would thereby be extended to approximately 250-300 miles. Thereafter they would be supported by fuel dumps created to their rears, utilizing their own organic transport to bring forward the "life's blood" of mechanized armies. This concept, coupled with OKH's need to create heavy truck units for general support of the entire campaign, heavily impacted other German units, especially the infantry divisions. The infantry divisions had to give up most of their truck transport, and in its stead 75 infantry divisions were each augmented with 200 Polish peasant type carts for transport.[37] The consequence of all this was that the Germans attacked Russia with two armies - the first we have heard so much about was fast and mobile, the second constituting the bulk of the infantry formations plodded along at two and one half or three miles per hour. As a result Manstein as commander of 56 Panzer Corps, which included an infantry division (290), in commenting on his corps' accomplishments does not mention his infantry in any vain other than that it was in the rear, conducting record breaking marches to close the corps.[38] But, it was as the commander of the Eleventh Army where Manstein was initially frustrated by the lack of mobility of his army. When Manstein assumed command of the Eleventh Army he had no armored

or motorized units and his overall ration strength was about 200,000 men and about 70,000-90,000 horses.[39] As a result this 20th century warrior led a "modern army" into Crimea that was hardly more mobile than its 19th century counterparts. Consequently, when his army smashed through the Russian formations in the northern portion of the peninsula, Manstein found it virtually impossible to cut off their retreat to Sevastopol.[40] Similarly, in response to his request for reinforcements, Army Group South assigned him 132 Infantry Division on 15 October 1941. Since they lacked motorized transport, they marched the 185 miles to the Crimea, finally arriving on the 28th. Though other factors contributed to Manstein's delay in capturing the Crimea truck transport, mobility in general, appears to be a key factor. Issues of mobility would plague him throughout his operations in Russia, for as the war progressed, Germany found itself increasingly devoid of the industrial base to support its armies in the field.

FUEL

Though mentioned by most, if not all, writers as a critical factor for German operations in Russia, Manstein rarely discusses the issue of fuel; i.e., the lack thereof, save for his treatment of encircled/cutoff German formations. Fuel shortages did impact his campaigns. But the transport issue was so critical and impacted across all lines of supply to such an extent that transport clouds all other issues. After realizing Germany's transport deficiencies, in reviewing German accounts of supply

shortages, on whatever front, one must always ask the question; was this a production or distribution problem?

Transport/distribution issues aside, German capacity for providing the gross tonnage of fuel required by her armies was insufficient. The war in Russia was to be a relatively short one and planners estimated that:

> available stocks of ammunition and fuel and the expected output of these two items by the German war production were adequate to supply the planned operation in the light of the time schedule set for it.[42]

Initial estimates held that her armies would consume some 250,000 cubic meters of fuel per month; however, within two weeks of the start of the offensive these figures were raised to 330,000 cubic meters.[43] Obviously actual fuel consumption was higher than initially projected and the war did not end by the winter of 1941-42. As a result by the summer of 1942, fuel shortages were seriously affecting the German Army; indeed, entire corps were literally immobilized.[44] In the autumn, Manstein's Eleventh Army was equally affected. Writing of the start of the Crimean Campaign, General H. Reinhardt states, "POL supplies in particular were scarce, and by no means adequate for a large-scale operation."[45] The cause of the fuel shortage at the operational level was irrelevant, but its effects were constricting on operations. Following the winter of 1941-42 fuel distribution to the armies and army groups was no longer made on the basis of requisitions from those formations, but it "was distributed in monthly installments according to strictly controlled quotas."[46] Field commanders were now having to "make

do" with whatever they received vice receiving fuel for what they needed to execute their operational schemes/concepts.

EQUIPMENT - REPAIR AND REPLACEMENT

Logistics involves more than the transport of POL and other consummables to armies in the field; it involves "maintenance" of those armies in the broadest sense of the word. Prior to the Russian Campaign, German army and army group headquarters were relatively free of responsibility in terms of repair, replacement and maintenance of weapons, transport, armored vehicles etc. But in Russia due to the unexpected length of the campaign, transport shortages and vast distances involved these major formation headquarters became increasingly involved in the full spectrum of logistics. The one new function to heavily impact them was maintenance and repair.

MAINTENANCE AND REPAIR

Tank maintenance and repair is of some interest and will be examined as it represented maintenance and repair across the equipment spectrum. Prior to the Russian offensive, tank repair was fairly well centralized at division level, and if a tank could not be repaired it was evacuated to the rear (Germany) for depot level repair/rebuild. But the vastness of Russia was unique and "it became necessary from the outset, to place on the armies and army groups the burden of handling repairs etc."[47] In order for those formations to perform this newly assigned role, a number of measures were taken to include better technical training for maintenance units and the creation of new tank

maintenance units.[48] This organization or reorganization did not become fully effective until the summer of 1942, but by then armored battalions, regiments, divisions and the armies and army groups were all deeply involved in tank maintenance. As well they had to be for by 4 September 1941, some 10-11 weeks after the start of the Russian campaign, 53 percent of all German tanks in the Russian theater were deadlined for repair or disabled.[49]

Whatever improvements these newly created field maintenance units were expected to make never fully materialized. German tank repair/maintenance, as well as most other equipment repair, was hampered -- worse yet crippled -- by the most basic of factors -- spare parts. Throughout the war, "the Ministry of Armaments pushed the production of new tanks to the detriment of the manufacture of spare parts."[50] As an example in the autumn of 1942 heavy Tiger tanks were committed for the first time in Russia and the neglect for spare parts resulted in but one spare engine and one spare transmission for every 10 tanks produced.[51] As a result most of these tanks, in short order, were deadlined or disabled because of a lack of spare parts. Therefore cannibalization became the norm in the German tank maintenance system. Though cannibalization resulted in the loss of a tank or tanks it enabled maintenance personnel to put other tanks back into the fight. German field commanders were cognizant of the spare parts shortages and repeatedly urged their production. However, Hitler would allow nothing to interfere in the creation of new formations.

REPLACEMENT

In light of the above allusion to Hitler's drive for the creation of new formations and its impact on the production of spare parts, the official German government policy on the replacement of damaged, destroyed or lost equipment is easy to deduce. "Desiring to place as many new units on the front as possible, Hitler usually insisted that approximately 90% of new production should be used for equipping new units."[52] As a result field commanders came to realize that lost equipment would be replaced slowly, if at all. For example, 75,000 vehicles were lost during the winter battles of 1941-42; however, replacement vehicles from 1 November 1941 to 15 March 1942 only numbered 7500.[53] At the tactical and operational level, the policy emphasizing the creation of new units to the detriment of maintaining existing units in the field had significant impact.

Units once committed to active service rarely received replacement equipment, and as one would expect in the Russian theater, they were bled white. In this regard, in analyzing/describing the forces he commits to action, Manstein regularly describes armored divisions with a total strength of 50, 30, or even five tanks. His experienced division commanders were therefore constrained to operate at the battalion or even platoon level; i.e., those most experienced were constrained by resources to operate below their capabilities. Conversely, newly constituted and recently assigned divisions, because of their materiel superiority, had all too often to be committed to action upon their arrival. As a result new divisions, in large measure

inexperienced and untrained in large formation operations, sustained disproportional combat losses and generally did not perform up to standards.[54] Therefore the policy of creating new units at the expense of maintaining existing units was severely criticized by field commanders, "since it was a known fact that new units in combat lost much more equipment than seasoned troops."[55]

In sum, Hitler's replacement policy, or lack thereof, resulted in a situation whereby experienced commanders who could employ and conserve resources were denied the opportunity to do so. On the other hand, untested units were fielded and committed to action only to have precious resources destroyed due to their lack of preparation and training. Manstein in commenting on this issue sums it up best; "had he (Hitler) only put the personnel and equipment they required into our own battle-tested divisions, things might have turned out very differently."[56]

In reviewing the entire logistics issue from the German perspective, if Germany was to have been successful in Russia, the war had to be won quickly in 1941. But the war was not won, and as General von Mellenthin comments:

> By the end of 1941 (the) German war economy was in a serious plight. We did not have the oil supplies necessary for waging war... the Eastern campaign was making colossal demands for vehicles, armor, antitank guns, and spare parts. By the end of 1941 it had become impossible for Germany to win the war...[57]

CHAPTER IV

ENDNOTES

1. Martin Van Creveld, Supplying War: Logistics From Wallenstein to Patton, p.1.

2. B.H. Liddell Hart, History of the Second World War, p. 157.

3. Joint Chiefs of Staff, Publication 1, Department of Defense Dictionary of Military and Associated Terms, pp. 213-214.

4. Van Creveld, Supplying War, p. 146.

5. Ibid., p. 146-147.

6. War Department, Foreign Logistical Organizations and Methods, p. 5.

7. Major General Alfred Toppe, Problems of Supply in Far Reaching Operations, Vol. I, p. 21.

8. Ibid., p. 23.

9. Ibid.

10. Martin Van Creveld, Fighting Power: German and U.S. Army Performance, 1939-1945, p. 47.

11. War Department, Foreign Logistical Organizations and Methods, p. 6.

12. Toppe, p. 14.

13. Ibid., p. 22.

14. Gen Lt. A.D. Max Bork, Comments on Russian Railroads and Highways, p. 6.

15. Gen Bork postulated that trucks could have been used exclusively for logistics transport only if their numbers were increased by 700 percent.

16. Bork, p. 3.

17. Ibid.

18. War Department, Foreign Logistical Organizations and Methods, p. 116.

19. Bork, p. 15.

20. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. VII A, p. 190.

21. Manstein, pp. 222-225.

22. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. VII A, p. 212.

23. Bork, p. 35.

24. Manstein, p. 321.

25. Bork, p. 35.

26. Van Creveld, Supplying War, pp. 145-147.

27. Ibid., p. 144.

28. Len Deighton, Blitzkreg: From the Rise of Hitler to the Fall of Dunkirk, p. 148.

29. Van Creveld, Supplying War. p. 151.

30. Manstein, p. 524.

31. Bork, p. 43.

32. Deighton, p. 148.

33. Ibid.

34. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. V, p. 137.

35. Bork, p. 31.

36. Van Creveld, Supplying War. p. 152-153.

37. Albert Seaton, The German Army 1933-45, p. 166.

38. Manstein, pp. 182-183.

39. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. II, p. 93.

40. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. VII A, pp. 145-146.

41. Ibid., p. 150.

42. Toppe, p. 22.

43. Ibid.

44. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. V, p. 155.

45. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. VII A, p. 139.

46. War Department, Foreign Logistical Organizations and Methods, p. 101.

47. Toppe, p. 20.

48. Department of the Army, DA Pamphlet 20-202, German Tank Maintenance in World War II, p. 3.

49. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. V, p. 72.

50. DA Pamphlet 20-202, p. 24.

51. Ibid., pp. 24-25.

52. War Department, Foreign Logistical Organizations and Methods, p. 91.

53. U.S. Army War College, Selected German Operations on the Eastern Front, Vol. V, p. 137.

54. Manstein, p. 230.

55. War Department, Foreign Logistical Organizations and Methods, p. 91.

56. Manstein, p. 522.

57. Major General von Mellenthin, Panzer Battles, p. 429.

CHAPTER V

CONCLUSIONS/RECOMMENDATIONS

Manstein was a man of incredible powers in the arena of military operations. He was a tactician and strategist of unquestionable talent who possessed the requisite skill to effectively employ combined forces. But he was not the stereotypical Prussian military automaton, for he was a thoughtful, sensitive and compassionate man who went into battle with an unyielding sense of honor and maintained the highest moral standards. Though Manstein may best be remembered for his military genius, he possessed a moral fiber, candor and sense of honor that are as relevant to commanders today as they were to Manstein over 40 years ago.

As a commander, Manstein resolutely held that the commanders proper position was as far forward as possible. He appreciated the strain placed on officers and men by the nature of mobile, armored warfare, and realized the benefit of the "top brass" being up front, visible to the troops. But Manstein was also drawn to the front by other considerations. Situations changed rapidly and constantly, owing to the nature of mobile operations, and he was convinced that the commander had to be as far forward as possible in order to exploit or counter situations as they arose. However, Manstein was equally aware of the import of setting the example - by being at the front himself, his subordinate commanders in like manner would lead from the front.

And as to be expected of a commander of Manstein's ilk, he demanded that his subordinates exercise their own initiative in carrying out assigned missions. By fostering initiative and a capability for independent action in his subordinates, Manstein realized the benefits to be reaped in enhancing his own flexibility of action. Initiative was a force multiplier that had to be cultivated and encouraged in order to execute blitzkrieg and counter the thrusts of a numerically superior foe. To this end he generally refused the temptation to interject himself in the military affairs of his subordinates. But, when the issue at hand was one that had far reaching consequences for his command, he guided his subordinates' actions with a firm and sure hand. And as he clearly demonstrated for three years in the Russian Campaign, Manstein was adept in commanding and controlling allied formations.

Though one of the foremost practitioners of blitzkrieg, Manstein was far from the personification of today's "modern warrior." He did not tolerate the mismanagement or meddling of higher headquarters, and he possessed the personal fortitude and candor to argue positions contrary to those of his superiors. He was a commander who acted without seeking permission, who let his success or failure be the ultimate judge of the correctness of his action. To him command was a sacred trust, and the commander could only be judged by success or failure and not by his rigid adherence to the dictates or wishes of a higher headquarters. In sum, Manstein was the personification of an able, straight forward field commander who demonstrated a genuine talent for the

execution of joint/combined warfare on the dispersed and fluid battlefield.

Despite his tactical brilliance, Manstein nonetheless required a flexible and reliable communications capability in order to actualize his overarching philosophy of command. To this end his accomplishments were made possible by the efforts of those that accurately anticipated the communications requirements of mobile warfare. Foremost among these visionaries was General Heinz Guderian, who successfully argued for the development of mobile communications vehicles and the need for individual tank communications. Due in large measure to Guderian's efforts, Manstein was able to lead from the front, and yet remain in contact with his own and subordinate headquarters. And the diffusion of radio communications championed by Guderian provided Manstein a flexibility and mobility in operations unmatched by his adversaries. This in large measure contributed to his success in the Russian theater.

But of all the lessons to be drawn from Manstein and the general German communication experience of the Second World War, none is more relevant today than the communications doctrine they developed in support of their operational doctrine/concept. First, they operated under the principle that means of communication should be established to the lowest level possible in order to enhance command, control, flexibility and coordination. Second, they developed/organized communications units to provide for as secure a means of communication as then available. Third, redundant communications were seen to be an operational imperative. And lastly, of perhaps the greatest

relevance today, their doctrine identified the import of their communications officers in supporting any operational scheme. In sum, a communication doctrine/methodology was developed in the 1930's that will prove equally valid on the dispersed, fluid and fast paced battlefield of the twenty-first century.

But of all the lessons to be derived of the campaigns of Manstein, indeed of German experience in the Second World War, none is of greater concern than the relationship of the operational art to logistics in the broadest sense. The operational calculus for successfully engaging in major hostilities includes more than doctrine, communications and the like, but inextricably involves the full spectrum of provisioning armies committed to battle. Germany entered into the Second World War devoid of the industrial base and resources necessary to meet the demands of the Russian Campaign, let alone war on a global scale. That the Germans apparently came so close to success in Russia:

> Was due less to the excellence of the preparations than to the determination of troops and commanders to give their all, to bear the most appalling hardships and make do with whatever means were given to, or found by, them.[1]

But perhaps the Germans owed their initial success to their adversaries unpreparedness and ineptitude. As Schlieffen once said "in a battle or campaign, the loser just as much as the winner, contribute to the outcome by the actions they take."[2]

Notwithstanding her initial victories, in the end Germany failed, and in large measure her failure can be attributed to two major logistical shortcomings. First, the German Army operated

under a severe military doctrine and capability mismatch; i.e., blitzkrieg was her operative doctrine but Germany had a basic inability to equip and sustain massive formations in prolonged, far reaching mobile operations. Second, her broad spectrum logistical planning was seriously flawed. In response to the stagnant warfare and carnage of the First World War on the Western Front, the German military developed and adopted the concept of fast paced, mobile warfare - blitzkrieg. But unfortunately for Germany, when she began to rapidly rearm in the 1930's, she lacked the industrial base to equip and sustain massive mobile formations. As we have seen one of her primary deficiencies was in the area of truck transport. The German drive to rapidly modernize and provide her army requisite doctrinal mobility, resulted in the usage of 100 different types of trucks and 52 types of cars in the German Army by 1938.[3] But by the time of the invasion of France, transport was still a major deficiency. As a result during the invasion radical stopgap measures had to be employed in order to sustain her advancing armies. Subsequently she attempted to rapidly reorganize her logistical system.

By the time of the Russian Campaign and her absolute need to meet unprecedented demands for motorized transport, every type and description of vehicle had to be pressed into service. The heretofore unprecedented logistical transport demands of a campaign in the vastness of Russia, once again forced her to "make-do" with whatever was available to marginally meet her perceived requirements. As a result, in the opening moves of the

Russian Campaign the German Army found itself suffering the requirement of pressing into service some 2,000 types of vehicles.[4] As one can imagine standardization, the requirement for spare parts and other associated vehicular concerns became virtually a hopeless situation. But even with "making-do" with all means at her disposal, Germany could not support the bulk of her Army vis a vis the blitzkrieg doctrine. To this end only 33 "fast divisions" could be fully mechanized and or motorized for the Russian offensive; of the 144 divisions initially earmarked for the campaign 111 were to be seriously lacking motorized transport. As a consequence, Germany found itself attempting to overrun European Russia with 33 mobile divisions executing blitzkrieg, with the remaining bulk, of her army "somewhere" in trace following at two and one-half to three miles per hour.

Following a review of the German situation in the Second World War, a lasting issue that emerges for modern planners and commanders is that of articulated, published doctrine versus the genuine capability to execute that doctrine. Doctrine alone is insufficient; i.e., doctrine without the requisite ability to support and execute that doctrine is worse that useless. It may lead to an exaggerated sense of military power or battlefield capability.

In examining/developing doctrine, one must analyze, remain cognizant of, and articulate the full spectrum personnel, communications, equipment and logistical requirements necessary to fully actualize any specific military doctrine. This entire doctrine to genuine capability continuum, generally takes years and considerable resources to successfully execute. A great many

parts must come together to complete the entire process. And until all the requirements are met, one must guard against the execution of a doctrine without the doctrine's overarching material requirements being available. Today's doctrine must be based on available and ready resources; lest we like the Germans in Russia find ourselves adhering to a doctrine that is unsupported and therefore unexecutable.

The second major lesson to be derived from the German logistical experience in World War II lies in the area of logistical plans and policies. Logistics plans can be no better than the operational plans on which they are based and are intended to support. The assumption that the war in Russia would be of short duration had its greatest impact in the area of logistics. A short war appeared to be supportable and logistical plans were developed accordingly. But, as we all know, the basic assumption was erroneous. As a consequence, the strained German logistical system and infrastructure found itself devoid of the necessary flexibility and capability to minimally meet the requirements of an extended campaign in Russia. And German commanders of unparalleled brilliance, such as Manstein, found themselves ever more operationally constrained by a lack of things logistic.

German logistical plans were based on optimal factors; i.e., best case planning. But as Moltke the Elder had noted, "no operation plan extends with any certainty beyond the first encounter with the main body of the enemy."[5] How better able is a logistical plan to sustain the shock of battlefield reality?

Obviously it fared no better than the operational plan in the German case, and modern plans, similarly founded, will assuredly fare no better. Plans that are based on the assumption that maximum output and capability will minimally support operational needs are doomed to failure.

Similarly the operator-logistician relationship that apparently existed in the German Armed Forces, prior to and during the Second World War, may have significantly contributed to German logistical failure. "German staffs at all levels were operational and tactical organs above all."[6] Their primary focus was to provide direction in combat while dedicating a minimum amount of effort to other tasks. Matters of logistics took on a secondary importance in that the Germans did not treat logistics considerations as a coequal factor in the planning and execution of military operations. To this end, during the Second World War,

> The German Armed Forces demanded first from their supply system that it should be adapted to the operational conduct of the war and that it should no way hinder or interfere with the freedom of operational decisions. With such a concept supply never occupied the relatively decisive position that it occupied within the U.S. Forces.[7]

As a consequence operational plans were formulated without due consideration for logistical factors, factors which decisively impacted on Manstein's operations and the German Army as a whole. And today, in our own Armed Forces, we see the same tendency where the primacy of operations results in the summary dismissal or lack of consideration of things logistic.

In sum, Manstein was a commander of rare brilliance with few peers at the operational level of war. He was supported by a communications doctrine and capability that enabled him to exercise his philosophy of command and exploit his tactical and operational vision while in command of a corps, an army and finally of an army group. But even a Manstein could not overcome the basic logistical deficiencies of the German war machine. In the modern age of "machine warfare" logistical wherewithal is absolutely essential. Without adequate logistical support, well motivated and well led formations guided by bold and innovative doctrine will quickly become ineffective and subsequently irrelevant.

CHAPTER V

ENDNOTES

1. Van Creveld, Supplying War, p. 175.

2. Manstein, p. 441.

3. Deighton, p. 148.

4. Van Creveld, Supplying War, p. 151.

5. Manstein, p. 100.

6. Van Creveld, Fighting Power, p. 47.

7. War Department, Foreign Logistical Organizations and Methods, p. 91.

BIBLIOGRAPHY

A. BOOKS

1. Creveld, Martin Van. Fighting Power: German and U.S. Army Performance, 1939-1945. Westport, Connecticut: Greenwood Press, 1982.

2. Creveld, Martin Van. Supplying War: Logistics from Wallenstein to Patton. London: Cambridge University Press, 1984.

3. Deighton, Len. Blitzkrieg: From the Rise of Hitler to the Fall of Dunkirk. New York: Alfred A. Knopf, Inc., 1980.

4. Goerlitz, Walter, translated Brian Battershaw. History of the German General Staff 1657-1945. Westport, Connecticut: Greenwood Press, 1975.

5. Hart, B.H. Liddell. History of the Second World War. New York: G.P. Putnam's Sons, 1970.

6. Hart, B.H. Liddell. The Other Side of the Hill. Revised and Enlarged Ed., London: Cassell and Company Ltd., 1951.

7. Hart, B.H. Liddell. Strategy. New York: Frederick A. Praeger, 1967.

8. Macksey, Kenneth. Guderian: Creator of the Blitzkrieg. New York: Stein and Day Publishers, 1976.

9. Manstein, Erich von. Lost Victories. Novato, California: Presidio Press, 1982.

10. Mellenthin, F.W. von. German Generals of World War II: As I Saw Them. Norman, Oklahoma: University of Oklahoma Press, 1977.

11. Mellenthin, F.W. von., trans. H. Betzler, ed. L.C.F. Turner. Panzer Battles. New York: Ballantine Books, 1984.

12. Paget, R.T. Manstein, His Campaigns and His Trial. London: Collins, 1951.

13. Seaton, Albert. The German Army 1933-1945. New York: St. Martin's Press, 1982.

B. U.S. GOVERNMENT PUBLICATIONS

1. Abberger, Erich. Activities of a Senior Engineer Officer of a Field Army During the Campaign in Russia. Washington: Department of the Army, G-2, 10 October 1953.

2. Bork, Max. Comments on Russian Railroads and Highways. Washington: Office of the Chief of Military History, Department of the Army, 1953.

3. Department of the Army, DA Pamphlet 20-202. German Tank Maintenance in World War II. Washington: U.S. Government Printing Office, June 1954.

4. Joint Chiefs of Staff, Publication 1. Department of Defense Dictionary of Military and Associated Terms. Washington: U.S. Government Printing Office, 1 June 1987.

5. Toppe, Alfred. Problems of Supply in Far Reaching Operations. Vol I. Washington: Office of the Chief of Military History, Department of the Army, 1951.

6. U.S. Army War College, Art of War Colloquium, Conversations with a Stuka pilot. Carlisle, PA: November 1983. Reprint of "Conversations with a Stuka Pilot", Conference featuring Paul - Werner Hozzel, Brig. General (Ret.) German Air Force at the National War College, prepared by Battelle Columbus Laboratories, Tactical Technology Center, 505 King Ave, Columbus Ohio. Sponsored by contract No. DAAK 40-78-C-0004, MIPR No. FY 7615-78-05106.

7. U.S. Army War College, Art of War Colloquium. Selected German Operations on the Eastern Front. Vol. II. Carlisle, PA: November 1983. Reprint of "Combat in the East" by Fritz Wentzell, prepared by Historical Division, Headquarters European Command - Foreign Military Studies, Vol. I, Number 10, April 1952.

8. U.S. Army War College, Art of War Colloquium. Selected German Army Operations on the Eastern Front. Vol. V. Carlisle, PA: December 1983. Reprint of Department of the Army Pamphlet, No. 20-261a titled "The German Campaign in Russia: Planning and Operations (1940-1942)", March 1955.

9. U.S. Army War College, Art of War Colloquium. Selected German Army Operations on the Eastern Front. Vol VII A. Carlisle, PA: November 1983. Reprint of "Selected German Army Operations on the Eastern Front (Operational)." by Hellmuth Reinhardt, prepared by Historical Division, Headquarters United States Army Europe - Foreign Military Studies Branch, MS #P-143A.

10. U.S. Army War College, Art of War Colloquium. Selected German Army Operations on the Eastern Front. Vol VII B. Carlisle, PA: November 1983. Reprint of unidentified document.

11. War Department, Foreign Logistical Organizations and Methods. Washington: 15 October 1947. Prepared for the Secretary of the Army.

C. TRANSCRIPTS/STUDIES

1. Battelle Columbus Laboratories. Armored Warfare in World War II. 10 May 1979. Transcript of a conference featuring F.W. von Mellenthin, prepared by Battelle Columbus Laboratories, Tactical Technology Center, 505 King Ave, Columbus, Ohio. Sponsored by Contract No. DAAK 40-78-C-0004.

2. Battelle Columbus Laboratories. Translation of Taped Conversation with General Hermann Balck of 12 January 1979. Transcript prepared by Battelle Columbus Laboratories, Tactical Technology Center, 505 King Ave, Columbus, Ohio. Performed under Contract No. DAAK 40-78-C-0004, MIPR No. Fy 7615-78-05106.

3. The BDM Corporation. Generals Balck and Von Mellenthin on Tactics: Implications for NATO Military Doctrine. 19 December 1980. Transcript of a conference featuring Generals Balck and Von Mellenthin, prepared by the BDM Corporation, 7915 Jones Branch Drive, McLean Virginia under Contract NO. DNA 001-78-C-0114-P4.

4. Izzo, Lawrence L. An Analysis of Manstein's Winter Campaign on the Russian Front, 1942-43. Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, 1986. A paper presented to the Director, School of Advanced Military Studies. Office Symbol - ATZL-SWV.